

Foster (W. D.)

OPERATIONS
ON THE
INTESTINES.



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presented by the author



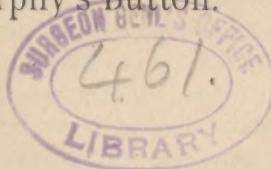
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Gall-Bladder and Intestinal Anastomosis
Murphy's Button.

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WOUNDS of the abdominal viscera are frequent and dangerous. Death results chiefly from shock, from hemorrhage, and from peritonitis. In the Medical and Surgical History of the War of the Rebellion, 2d Surgical Volume, page 201, it is stated that of the aggregate of wounds received in battle, between 3 and 4%, (3.8%) were wounds of the belly: about one-tenth of those slain in battle perished from injuries of the abdomen; that the mortality of wounds of the intestines (Loc. Cit. page 202) is 80.3%. Statistics of modern European wars show a mortality from intestinal wounds of 75.1%. The data here found is the most trustworthy known to us.

Up to a very late period intestinal wounds were looked upon as necessarily fatal; surgeons, civil as well as military, made little or no attempt to repair the injury. At the present, "all over the world investigators are trying to solve the many perplexing problems that accident and disease of the gastro-intestinal tract present to them for consideration." In general at this day, in the hands of the best operators, success is indifferent in procedures to repair these injuries—the mortality rate continues very high. Failures are ascribed to many different causes. One reports that, "the suture was imperfectly applied." Another, "the induced invagination increased after the operation, until complete obstruction was produced; openings in the bone plates and discs were not in apposition; the ends of the bone plates caused pressure, atrophy and perforation; the catgut ligatures were too rapidly absorbed; lastly, and with appalling frequency, prolonged operation produced fatal shock" (Murphy). Many other causes of failure are noted by different contributors on this subject.

In all abdominal operations an anesthetic is imperative. The

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instruments required are various kinds of knives, a grooved director, varied curved scissors, intestinal clamps, hemostatic forceps, needles, sutures, and drainage tubes. The opening of the abdomen by incision is no longer a novelty. Laparotomy is now so frequently practiced, and the literature on the subject is so fresh and ornate, that I will not presume to dwell here. One remark perhaps may not be irrelevant. The classical instruction to make the incision in the median line is now obsolete, for two reasons: First, it is impracticable and based on erroneous anatomical grounds. If any surgeon thinks he can cut down canonically on the linea alba, let him try, and fail. Second, the white line is non-vascular, therefore when this aponeurosis is divided the subsequent union is delicate, easily broken down, and is indeed the prolific cause of post-laparotomy hernia. For these reasons it is wise to let the scalpel stray into the region of the recti muscles; this tissue when subsequently brought into apposition by appropriate sutures will unite into a sound, firm, and durably resisting wall.

After the intestinal wound or disease is thus exposed, the surgeon is confronted with the question of preponderating import: "How shall the wound be closed, or the disease be removed? What kind of suture is the best, and what disposition shall be made of the gut after closure of the wound?" These questions are discussed in some detail very ably by Greig Smith (*Abdominal Surgery*, London; J. and A. Churchill, third edition, P. 479 Et. Seq.). It is here stated that Bishop in a valuable paper on Enteroraphy published in the *Medical Chronicle*, September, 1885, has collected no fewer than thirty-three (33) different methods of suture, some fantastic and some obsolete. Let us consider this: The essentials of an intestinal suture may fairly be claimed to be: First—It shall secure and keep up perfect closure of the wound through its whole extent. The slightest imperfection in apposition will permit of extravasation of intestinal contents; every stitch, therefore, must be perfect. Second—It shall have a known and durable period of existence in the tissues. Sutures that are not absolutely pure and unirritating will cause suppuration, as will tying them too tightly. Certain forms of catgut, although durable enough, are not very pliable, or very smooth; unprepared gut is liable to be too speedily absorbed. Fine braided silk, properly prepared, is admitted to be the very best suture material for divided intestines. Third—No suture passing through the peritoneum must penetrate the mucous membrane.

This would be practically to insert a seton to be followed by a fistula between the cavity of the gut and the peritoneum. A suture involving the mucous membrane should always be tied on the inside of the gut; if it suppurates, the pus passes into the lumen of the gut where it is harmless. Fourth—An intestinal suture should be capable of being rapidly inserted. Several varieties of sutures fairly satisfy these requisites. (Greig Smith Loc. Cit.). The most useful of these are Dupuytren's continuous; that of Appolito, Lembert's; Czerny's, Gusenbauer's, or combinations of two or more of these.

After the suture is applied another very grave problem is presented, to-wit: What disposition is to be made of the sutured gut? Three methods are available: First—It may be returned into the abdominal cavity, the abdominal wound being closed over in the usual way. Second—The bowel carefully protected may be left outside for a few hours till adhesive inflammation has sealed up the lines of incision. The sutures in the parietes are placed in position, but not tied till the bowel is returned. Schede suggested this plan, but the risks of distension of the extruded bowel, and of the extrusion of more bowel are so great, that it has not generally been adopted. Third—The sutured bowel is returned, and fixed by a stitch or two to the parietal peritoneum. The abdominal wound is left open at the point of fixation, but closed above and below. A good many cases which have recovered have done so after feces had burrowed an opening through the closed parietal wound; and some have died apparently because free exit was not given to extravasated intestinal contents. There is no strong objection to this plan; if there is any doubt as to the perfection of the suturing, it ought to be followed.

What circumstances in addition to wounds and injuries will render operative interference necessary? These are many and varied. Cancer of the pylorus, all kinds of intestinal obstructions including invagination, stenosis of the cystic, hepatic or common duct, tumors, one and all may render surgical interference desirable.

I have recently read a monograph, sent me by the author, entitled "Original Research in Abdominal Surgery, Ideal Approximation of Abdominal Viscera without Suture," by J. B. Murphy, M.D., Chicago.

The author formulates the questions at issue thus: "What are the best means and methods of producing agglutination of surfaces and preventing subsequent contraction at the point of adhesion?"

"If means can be devised: First—To hold the surfaces in contact. Second—While in contact, to produce a speedy and permanent adhesion of the surfaces. Third—To keep an opening sufficiently large for the free passage of intestinal contents. Fourth—To produce as a result a cicatrix that will not contract to any great extent, and by the contraction produce complete or partial obstruction, we will have overcome the great barriers that still remain between us and ideal success in intestinal surgery. To overcome these obstacles, I have devised a mechanical means to dispense with the need of sutures, the necessity of invagination, the possibility of non-apposition, the danger of sloughing through the discs, the too rapid digestion of the catgut, the almost insurmountable difficulties of the technique of operation, the prolonged and fatal exposure of the abdominal contents, and the protracted anesthesia. This is known as the anastomosis button."

Then follows a description of the button, with several cuts, which are necessary to a correct understanding of the device. The author then proceeds to review the history of cholecysto-enterostomy, describes the method of inserting his button (with illustrative cuts) and quotes experiments made on dogs.

Three cases with results are also reported. Operations for gastro-enterostomy, pylorectomy, end-to-end approximation of intestines, excision of cecum with ileo-colotomy, in which the button was used, are appended. The author claims that these operations and the technique are so simple as to be freely available by the general practitioner.

This operation, cholecysto-enterostomy with Murphy's Button, I have made twice. The report of the case follows:

Mrs. A. M. S., æt. 58, Girard, Kas., native of Pennsylvania, small, German extraction.

History.—This lady came to the Homeopathic Hospital in September, 1891, complaining of general exhaustion, piles, womb and ovarian troubles.

September 21, 1891. I made a Whitehead operation on the rectum.

October 12. I made Emmet's operation for lacerated cervix, putting three wires on each side.

November 7. I made Goodell's operation for lacerated perineum, using five wire sutures—many catgut.

December 7. Returned home, apparently well.

July 18, 1892. Mrs. S. came back to All Saints' Hospital, suffering from ovarian and liver diseases.

July 19. Double oophorectomy, both ovaries proved to be cystic. The gall bladder found to be very large. Recovery without any circumstances of interest.

November 23. Cholecystotomy, by tapping and emptying the cyst, and then suturing to margins of wound. The bladder contained more than one pint of fluid, consisting of mucus and bile; the gall stones removed weighed about six drams, and the nurse counted 626 large enough to pick up with the fingers, besides many small ones not counted.

The specimen of calculi may be seen in the museum at the college. The fistula was closed at this time by several silver wire sutures. At the first dressing, however, it was found that the wires tore out, the wound gaped, and cystic contents were freely poured out on the abdominal surface. The fistula remains open.

February 15, 1893. I made a cholecysto-enterostomy, inserting the button according to Murphy's directions, and closed the fistula with many wire sutures. In consequence of the extensive adhesions and the changed intestinal topography the anastomosis, evidently, was in the colon. The button fell into the cyst and the external cystic fistula, not having closed, the button was fished out through this opening. The anastomosis soon closed and the contents of the gall bladder continued to escape through the abdominal fistula, as before the anastomosis was made.

April 28. I again inserted the button; this time making sure that the approximation is with the duodenum. No attempt was made at this time to close the fistula.

August 13, 1893. The record of this case may be appropriately and with much satisfaction completed by adding that the external fistula is now closed; the anastomosis between the gall cyst and the duodenum free, the biliary secretion being duly discharged through the intestines. At the last examination, made August 1, the button was found in the gall bladder, where it doubtless still remains. Its presence there does not appear to produce any disturbance whatever.

